

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

Claim 1

(Currently Amended) - An emission control exhaust gas aftertreatment apparatus for exhaust gases from diesel engines comprising a source of NO₂, ~~a particulate trap~~ a wall flow filter, means for directing flow of gases to a central portion of the filter, and an exhaust gas by-pass effective under all operating conditions, wherein a portion of the exhaust gases do not pass through the ~~trap filter~~, such that ~~between 50wt% and up to 85wt%~~ up to 85wt% of engine-out particulates are collected on the ~~trap filter~~ and combusted in the presence of said NO₂ in said ~~trap filter~~.

Claims 2 and 3

(Cancelled)

Claim 4

(Previously Presented) - An apparatus according to claim 1, wherein the source of NO₂ is a catalyst which is effective to convert at least a portion of the NO in the exhaust gases to NO₂.

Claim 5

(Currently Amended) - An apparatus according to claim 4, wherein the exhaust gases pass through the catalyst before passing through the ~~trap filter~~.

Claim 6

(Cancelled)

Claim 7

(Previously Presented) - An apparatus according to claim 1, in combination with NO_x control means.

Claim 8

(Previously Presented) - An apparatus according to claim 13, wherein said NO_x absorbent is effective to trap NO_x at relatively low exhaust gas temperatures, and releases NO_x when the exhaust gas temperature exceeds about 250°C for conversion or consumption in the combustion of particulate matter.

Claim 9

(Currently Amended) - A method of controlling emissions from diesel engine exhaust gases by trapping and subsequently combusting said particulate matter, comprising directing the flow of gases to a central portion of the filter, trapping-between 50wt% and up to 85wt% of particulate matter in said exhaust gas in a particulate trapping filter means and combusting said trapped particulate matter in the presence of NO₂ and causing a portion of said exhaust gases to by-pass said ~~particulate-trapping filter means~~ under all operating conditions.

Claim 10

(Cancelled)

Claim 11

C1 (Currently Amended) - An emission control exhaust gas aftertreatment apparatus for exhaust gases from light duty diesel engines comprising a source of NO₂, ~~a particulate trap, a wall flow filter, means for directing flow of gases to a central portion of the filter,~~ and an exhaust gas by-pass effective under all operating conditions, wherein a portion of the exhaust gases do not pass through the trap, such that ~~between 50wt% and up to 85wt%~~ of engine-out particulates are collected on the ~~trap~~ filter and combusted in the presence of said NO₂ in said trap.

Claim 12

(Currently Amended) - An apparatus according to claim 311, wherein the source of NO₂ is a catalyst which is effective to convert at least a portion of the NO in the exhaust gases to NO₂.

Claim 13

(Previously Presented) - An apparatus according to claim 7, wherein said NO_x control means is an NO_x absorbent.

Claim 14

(Currently Amended) - An apparatus according to claim 1, wherein the ~~trap~~ wall flow filter ~~comprises a wall flow filter and the~~ has peripheral regions thereof comprising the by-pass.

Claim 15

(Currently Amended) - An apparatus according to claim 1 further comprising a catalyst carried by the ~~trap~~ wall flow filter.

Claim 16

(New) - An apparatus according to claim 1, wherein the filter is effective to trap about 50wt% or more of engine-out particulates.

Claim 17

(New) - An apparatus according to claim 1, wherein the filter comprises woven wire mesh.

Claim 18

(New) - An apparatus according to claim 1, wherein the filter comprises knitted wire mesh.

Claim 19

(New) - A method according to claim 9, wherein the trapping step comprises trapping about 50wt% or more of particulate matter in said exhaust in said particulate filter.

Claim 20

(New) - An emission control exhaust gas aftertreatment apparatus according to claim 11, wherein about 50wt% or more of engine-out particulates are collected on the filter.

Claim 21

C1
(New) - An emission control exhaust gas aftertreatment apparatus for exhaust gases from diesel engines comprising a source of NO₂ and a particulate filter of sufficient capacity to accumulate particulate under all normal operating conditions, wherein the filter is effective to trap up to 85wt% of engine-out particulates for combustion in the presence of said NO₂ in said filter.

Claim 22

(New) - An apparatus according to claim 21, wherein the filter is effective to trap about 50wt% or more of engine-out particulates.

Claim 23

(New) - An apparatus according to claim 21, wherein the filter comprises woven wire mesh.

Claim 24

(New) - An apparatus according to claim 21, wherein the filter comprises knitted wire mesh.

Claim 25

(New) - A method of controlling emissions from diesel engine exhaust gases by trapping and subsequently combusting said particulate matter, comprising trapping up to 85wt% of particulate matter in said exhaust in a particulate filter and combusting said trapped particulate matter in the presence of NO₂ and causing a portion of said exhaust gases to by-pass said particulate filter under all operating conditions.

Claim 26

(New) - A method according to claim 25, wherein the trapping step comprises trapping about 50wt% or more of particulate matter in said exhaust in particulate filter.

Claim 27

(New) - An emission control exhaust gas aftertreatment apparatus for exhaust gases from light duty diesel engines comprising a source of NO₂ and a particulate filter of sufficient capacity to accumulate particulate under all normal operating conditions, wherein the filter is effective to trap up to 85wt% of engine-out particulates for combustion in the presence of said NO₂ in said filter.

Claim 28

(New) - An apparatus according to claim 27, wherein the filter is effective to trap about 50wt% or more of engine-out particulates.
